

### AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the present application.

1. (*currently amended*) A composition for the neutralization of chemical warfare agents or inactivation of biological warfare agents comprising:

water;

one or more monopersulfate compounds;

one or more buffers, at least one of which is selected from the group consisting of alkali metal and/or alkaline earth metal salt forms of bicarbonate and/or carbonate; and

one or more ketones, at least one of said ketones being selected from the group consisting of acetone, 2-butanone, 2-pentanone, 2-hydroxy-4-methyl-2-pentanone, hexafluoroacetone, trifluoroacetone, acetophenone, camphorsulfonic acid, and levulinic acid; and

one or more co-solvents;

~~wherein the monopersulfate compound(s) are present in a concentration range of about 0.1-40% w/v, the buffer(s) are present in a concentration range of about 0.05-20% w/v, and the ketone(s) are present in a concentration range of about 0.1-40% v/v; and~~

~~wherein the combination of at least one of the monopersulfate compounds and at least one of the ketones generates a dioxirane species suitable for neutralizing chemical warfare agents or inactivating biological warfare agents.~~

2. (*previously amended*) The composition of claim 1, wherein at least one of the monopersulfate compounds is an alkali metal salt form of monopersulfate.

3. (*canceled*)

4. (*previously amended*) The composition of claim 2, wherein at least one of the monopersulfate compounds is selected from the group consisting of alkali metal salt forms of peroxymonosulfuric acid alone or in combination with the alkali metal salts of sulfuric or persulfuric acid.

5-7. (*canceled*)

8. (*currently amended*) A composition for the neutralization of chemical warfare agents or inactivation of biological warfare agents comprising:

water;

one or more monopersulfate compounds;

one or more buffers, at least one of which is selected from the group consisting of alkali metal and/or alkaline earth metal salt forms of bicarbonate and/or carbonate;

one or more ketones, at least one of said ketones being selected from the group consisting of acetone, 2-butanone, 2-pentanone, 2-hydroxy-4-methyl-2-pentanone, hexafluoroacetone, trifluoroacetone, acetophenone, camphorsulfonic acid, and levulinic acid; and

~~one or more co-solvents; and~~

one or more surfactants<sub>5</sub>;

~~wherein the combination of at least one of the monopersulfate compounds and at least one of the ketones generates a dioxirane species suitable for neutralizing chemical warfare agents or inactivating biological warfare agents.~~

9. *(previously amended)* The composition of claim 8, wherein at least one of the monopersulfate compounds is an alkali metal salt form of monopersulfate.

10. *(canceled)*

11. *(currently amended)* The composition of claim 9, wherein at least one of the monopersulfate compounds is selected from the group consisting of alkali metal salt forms of peroxymonosulfuric acid alone or in combination with the alkali metal salts of sulfuric or persulfuric acid<sub>5</sub>;

~~at least one of the co-solvents is selected from the group consisting of acetonitrile, tert-butanol, propylene carbonate, propylene glycol, polypropylene glycol; and~~

~~at least one of the surfactants is selected from the group consisting of tetrabutylammonium hydrogen sulfate (TBAHS), cetyltrimethylammonium (CTMA) chloride, and/or octyl phenol ethoxylate.~~

12-28. *(canceled)*

29. *(new)* The composition of claim 1, wherein at least one of the co-solvents is selected from the group consisting of acetonitrile, tert-butanol, propylene carbonate, propylene glycol, and polypropylene glycol.

30. *(new)* The composition of claim 29, wherein at least one of the monopersulfate compounds is selected from the group consisting of alkali metal salt forms of peroxymonosulfuric acid alone or in combination with the alkali metal salts of sulfuric or persulfuric acid.

31. *(new)* The composition of claims 1, 2, 4, or 29, wherein the monopersulfate compound(s) are present in a concentration range of about 0.1-40% w/v, the buffer(s) are present in a concentration range of about 0.05-20% w/v, and the ketone(s) are present in a concentration range of about 0.1-40% v/v.

32. *(new)* The composition of claim 31, wherein the co-solvent(s) are present in a concentration range of about 0.01-40% v/v.

33. *(new)* The composition of claim 1, 2, 4 or 29, wherein the monopersulfate compound(s) are present in a concentration range of about 1-20% w/v, the buffer(s) are present in a concentration range of about 0.05-20% w/v, and the ketone(s) are present in a concentration range of about 0.1-20% v/v.

34. *(new)* The composition of claim 33, wherein the co-solvent(s) are present in a concentration range of about 0.5-20% v/v.

35. *(new)* The composition of claims 1 or 29, wherein the composition has a pH between about 5 to about 9.

36. (*new*) The composition of claim 8, wherein at least one of the surfactants is selected from the group consisting of tetrabutylammonium hydrogen sulfate (TBAHS), cetyltrimethylammonium (CTMA) chloride, and octyl phenol ethoxylate.

37. (*new*) The composition of claim 36, wherein at least one of the monopersulfate compounds is selected from the group consisting of alkali metal salt forms of peroxymonosulfuric acid alone or in combination with the alkali metal salts of sulfuric or persulfuric acid.

38. (*new*) The composition of claims 8, 9, 11 or 36, wherein the monopersulfate compound(s) are present in a concentration range of about 0.1-40% w/v, the buffer(s) are present in a concentration range of about 0.05-20% w/v, and the ketone(s) are present in a concentration range of about 0.1-40% v/v.

39. (*new*) The composition of claim 38, wherein the surfactant(s) are present in a concentration range of about 0.01-15% w/v.

40. (*new*) The composition of claims 8, 9, 11 or 36, wherein the monopersulfate compound(s) are present in a concentration range of about 1-20% w/v, the buffer(s) are present in a concentration range of about 0.05-20% w/v, and the ketone(s) are present in a concentration range of about 0.1-20% v/v.

41. (*new*) The composition of claim 40, wherein the surfactant(s) are present in a concentration range of about 0.01-5% w/v.

42. (*new*) The composition of claims 8 or 36, wherein the composition has a pH between about 5 to about 9.

43. (*new*) The composition of claim 1, further comprising one or more surfactants.

44. (*new*) The composition of claim 43, wherein at least one of the surfactants is selected from the group consisting of tetrabutylammonium hydrogen sulfate (TBAHS), cetyltrimethylammonium (CTMA) chloride, and octyl phenol ethoxylate.

45. (*new*) The composition of claim 44, wherein

at least one of the co-solvents is selected from the group consisting of acetonitrile, tert-butanol, propylene carbonate, propylene glycol, and polypropylene glycol; and

at least one of the monopersulfate compounds is selected from the group consisting of alkali metal salt forms of peroxymonosulfuric acid alone or in combination with the alkali metal salts of sulfuric or persulfuric acid.

46. (*new*) The composition of claim 43, wherein the monopersulfate compound(s) are present in a concentration range of about 0.1-40% w/v, the buffer(s) are present in a concentration range of about 0.05-20% w/v, the ketone(s) are present in a concentration range of about 0.1-40% v/v, the co-solvent(s) are present in a concentration range of about 0.01-40% v/v, and the surfactant(s) are present in a concentration range of 0.01-15% w/v.

47. (*new*) The composition of claim 43, wherein the monopersulfate compound(s) are present in a concentration range of about 1-20% w/v, the buffer(s) are present in a concentration range of about 0.05-20% w/v, the ketone(s) are present in a concentration range of about 0.1-20% v/v, the co-solvent(s) are present in a concentration range of about 0.5-20% v/v, and the surfactant(s) are present in a concentration range of 0.01-5% w/v

48. (*new*) The composition of claim 1, wherein

at least one of the monopersulfate compounds is selected from the group consisting of alkali metal salt forms of peroxymonosulfuric acid alone or in combination with the alkali metal salts of sulfuric or persulfuric acid; and

at least one of the co-solvents is selected from the group consisting of acetonitrile, tert-butanol, propylene carbonate, propylene glycol, and polypropylene glycol;

wherein the monopersulfate compound(s) are present in a concentration range of about 1-20% w/v, the buffer(s) are present in a concentration range of about 0.05-20% w/v, the ketone(s) are present in a concentration range of about 0.1-20% v/v, and the co-solvent(s) are present in a concentration range of about 0.5-20% v/v; and

wherein the composition has a pH range between about 5 to about 9.

49. (*new*) The composition of claim 48, further comprising one or more surfactants selected from the group consisting of tetrabutylammonium hydrogen sulfate (TBAHS), cetyltrimethylammonium (CTMA) chloride, and octyl phenol ethoxylate; and wherein the surfactant(s) are present in a concentration range of about 0.01-5% w/v.

50. (*new*) The composition of claim 8, wherein

at least one of the monopersulfate compounds is selected from the group consisting of alkali metal salt forms of peroxymonosulfuric acid alone or in combination with the alkali metal salts of sulfuric or persulfuric acid; and

at least one of the surfactants is selected from the group consisting of tetrabutylammonium hydrogen sulfate (TBAHS), cetyltrimethylammonium (CTMA) chloride, and octyl phenol ethoxylate;

wherein the monopersulfate compound(s) are present in a concentration range of about 1-20% w/v, the buffer(s) are present in a concentration range of about 0.05-20% w/v, the ketone(s) are present in a concentration range of about 0.1-20% v/v, and the surfactant(s) are present in a concentration range of about 0.01-5% w/v; and

wherein the composition has a pH range between about 5 to about 9.

51. (*new*) The composition of claims 1, 29, 48, or 49, wherein the monopersulfate derives from a potassium triple salt compound generally represented by the formula  $2\text{KHSO}_5 \cdot \text{KHSO}_4 \cdot \text{K}_2\text{SO}_4$ .

52. (*new*) The composition of claims 8, 36 or 50, wherein the monopersulfate derives from a potassium triple salt compound generally represented by the formula  $2\text{KHSO}_5 \cdot \text{KHSO}_4 \cdot \text{K}_2\text{SO}_4$ .